

§ 73.220

Relation	Co-Chan- nel	200 kHz	400/600 kHz
B1 to C2	175(109)	114(71)	55(34)
B1 to C1	200(124)	134(83)	75(47)
B1 to C	233(145)	165(103)	95(59)
B to B	211(131)	145(90)	71(44)
B to C3	178(111)	114(70)	69(43)
B to C2	211(131)	145(90)	71(44)
B to C1	241(150)	169(105)	77(48)
B to C	270(168)	195(121)	105(65)
C3 to C3	142(88)	89(55)	42(26)
C3 to C2	166(103)	106(66)	55(34)
C3 to C1	200(124)	133(83)	75(47)
C3 to C	226(140)	165(103)	95(59)
C2 to C2	177(110)	117(73)	56(35)
C2 to C1	211(131)	144(90)	76(47)
C2 to C	237(147)	176(109)	96(60)
C1 to C1	224(139)	158(98)	79(49)
C1 to C	249(155)	188(117)	105(65)
C to C	270(168)	209(130)	105(65)

[54 FR 9802, Mar. 8, 1989, as amended at 54 FR 35340, Aug. 25, 1989; 56 FR 57294, Nov. 8, 1991; 57 FR 46325, Oct. 8, 1992]

§ 73.220 Restrictions on use of channels.

(a) The frequency 89.1 MHz (channel 206) is revised in the New York City metropolitan area for the use of the United Nations with the equivalent of an antenna height of 150 meters (492 feet) above average terrain and effective radiated power of 20 kW, and the FCC will make no assignments which would cause objectionable interference with such use.

(b) In Alaska, FM broadcast stations operating on Channels 221-300 (92.1-107.9 MHz) shall not cause harmful interference to and must accept interference from non-Government fixed operations authorized prior to January 1, 1982.

[43 FR 45845, Oct. 4, 1978, as amended at 46 FR 50376, Oct. 13, 1981, 47 FR 30068, July 12, 1982; 48 FR 29507, June 27, 1983]

§ 73.232 Territorial exclusivity.

No licensee of an FM broadcast station shall have any arrangement with a network organization which prevents or hinders another station serving substantially the same area from broadcasting the network's programs not taken by the former station, or which prevents or hinders another station serving a substantially different area from broadcasting any program of the network organization: *Provided, however,* That this section does not prohibit arrangements under which the station is granted first call within its

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primary service area upon the network's programs. The term "network organization" means any organization originating program material, with or without commercial messages, and furnishing the same to stations interconnected so as to permit simultaneous broadcast by all or some of them. However, arrangements involving only stations under common ownership, or only the rebroadcast by one station of programming from another with no compensation other than a lump-sum payment by the station rebroadcasting, are not considered arrangements with a network organization. The term "arrangement" means any contract, arrangement or understanding, express or implied.

[42 FR 16422, Mar. 28, 1977, as amended at 57 FR 48333, Oct. 23, 1992]

§ 73.239 Use of common antenna site.

No FM broadcast station license or renewal of FM broadcast station license will be granted to any person who owns, leases, or controls a particular site which is peculiarly suitable for FM broadcasting in a particular area and (a) which is not available for use by other FM broadcast station licensees; and (b) no other comparable site is available in the area; and (c) where the exclusive use of such site by the applicant or licensee would unduly limit the number of FM broadcast stations that can be authorized in a particular area or would unduly restrict competition among FM broadcast stations.

[28 FR 13623, Dec. 14, 1963]

§ 73.258 Indicating instruments.

(a) Each FM broadcast station shall be equipped with indicating instruments which conform with the specifications described in § 73.1215 for determining power by the indirect method; for indicating the relative amplitude of the transmission line radio frequency current, voltage, or power; and with such other instruments as are necessary for the proper adjustment, operation, and maintenance of the transmitting system.

(b) The function of each instrument shall be clearly and permanently shown in the instrument itself or on

the panel immediately adjacent thereto.

(c) In the event that any one of these indicating instruments becomes defective when no substitute which conforms with the required specifications is available, the station may be operated without the defective instrument pending its repair or replacement for a period not in excess of 60 days without further authority of the FCC: *Provided that*, if the defective instrument is the transmission line meter of a station which determines the output power by the direct method, the operating power shall be determined by the indirect method in accordance with § 73.267(c) during the entire time the station is operated without the transmission line meter.

(d) If conditions beyond the control of the licensee prevent the restoration of the meter to service within the above allowed period, an informal letter request in accordance with § 73.3549 may be filed with the FCC, Attention: Audio Services Division, Mass Media Bureau, in Washington, DC, for such additional time as may be required to complete repairs of the defective instrument.

[41 FR 36818, Sept. 1, 1976, as amended at 48 FR 44805, Sept. 30, 1983; 50 FR 32416, Aug. 12, 1985; 63 FR 33876, June 22, 1998]

§ 73.267 Determining operating power.

(a) The operating power of each FM station is to be determined by either the direct or indirect method.

(b) Direct method. The direct method of power determination for an FM station uses the indications of a calibrated transmission line meter (responsive to relative voltage, current, or power) located at the RF output terminals of the transmitter. This meter must be calibrated whenever there is any indication that the calibration is inaccurate or whenever any component of the metering circuit is repaired or replaced. The calibration must cover, as a minimum, the range from 90% to 105% of authorized power. The meter calibration may be checked by measuring the power at the transmitter terminals while either:

(1) Operating the transmitter into the transmitting antenna, and determining actual operating power by the

indirect method described in § 73.267(c); or

(2) Operating the transmitter into a load (of substantially zero reactance and a resistance equal to the transmission line characteristic impedance) and using an electrical device (within $\pm 5\%$ accuracy) or temperature and coolant flow indicator (within $\pm 4\%$ accuracy) to determine the power.

(3) The calibration must cover, as a minimum, the range from 90% to 105% of authorized power and the meter must provide clear indications which will permit maintaining the operating power within the prescribed tolerance or the meter shall be calibrated to read directly in power units.

(c) *Indirect method.* The operating power is determined by the indirect method by applying an appropriate factor to the input power to the last radio-frequency power amplifier stage of the transmitter, using the following formula:

Transmitter output power = $E_p \times I_p \times F$

Where:

E_p = DC input voltage of final radio stage.

I_p = Total DC input current of final radio stage.

F = Efficiency factor.

(1) If the above formula is not appropriate for the design of the transmitter final amplifier, use a formula specified by the transmitter manufacturer with other appropriate operating parameters.

(2) The value of the efficiency factor, F , established for the authorized transmitter output power is to be used for maintaining the operating power, even though there may be some variation in F over the power operating range of the transmitter.

(3) The value of F is to be determined and a record kept thereof by one of the following procedures listed in order of preference:

(i) Using the most recent measurement data for calibration of the transmission line meter according to the procedures described in paragraph (b) of this section or the most recent measurements made by the licensee establishing the value of F . In the case of composite transmitters or those in which the final amplifier stages have